Textile Technology Digest

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ABSTRACTS

NOTE: Periodical articles and patents covered in "Textile Technology Digest" are abstracted elsewhere, but not all in the same publication. These abstracts are not intended to compete with any other source, but to supplement other sources for two specific purposes:

1. To bring together the pertinent references in a form adapted to rapid scanning, abstracts being selected and written to meet the interests (broadly interpreted) of member mills.
2. To present the information concisely, in sufficient detail to provide a survey of progress in any branch of the industry or to help readers decide whether they need to consult the original reference.

No attempt is made to include operating details or other information needed for following up a new development. Tailoring the abstracts to fit the needs of cotton textile technologists is the primary purpose. The layout and arrangement are intended for easy reading, rapid scanning and ready finding of pertinent items. Abstracts may be clipped for mounting on index cards (an extra copy for this purpose will be supplied on request), or whole issues may be filed in a standard 3-ring binder.

BLEACHING

PEROXIDE BLEACHING. Electrochemicals Dept., E. I. du Pont de Nemours & Co. Wilmington 98, Del., 1944; 24 pp.

Reviewed in *Chem. Eng. News 22,* 2135 (1944).

CELLULOSE DERIVATIVES

CELLULOSE ESTERS. T. S. Lawton, Jr. and H. K. Nason, Monsanto Chemical Co. *Ind. Eng. Chem. 36,* 1128-30 (1944). In air or oxygen ultraviolet photochemical degradation of cellulose acetate and nitrocellulose is accelerated, as revealed by viscometric data. In nitrogen the degradation by ultraviolet light is retarded. In either case the viscosity drop is gradual for cellulose acetate; for nitrocellulose it is abrupt at first, then levels off.

MOISTUREPROOFING LACQUER. George S. Heaven and Wm. Berry (to Can. Industries Ltd.). Can. P. 423 919, Nov. 21. A nitrocellulose lacquer for moistureproofing cellulosic foils contains paraffin wax 5, alkyd resin 25 and dibutyl phthalate 75% (all calculated on the nitrocellulose).

CELLULOSE FOILS. James A. Mitchell (to Can. Industries Ltd.). Can. P. 423 938-9-40-1, Nov. 21. Regenerated cellulose foils are moistureproofed with a product in which cyclized rubber has been reacted with an unsaturated acid such as acrylic, crotonic, or cinnamic acid; foils are given a coating composed of a rubber-phenol reaction product, polyisobutylene and wax; or a coating of cyclized rubber 24, paraffin wax 3 and polybutene 3 parts may be applied; or the foils are coated with a reaction product formed by condensing rubber with 2-napthol and then with an unsaturated acid such as acrylic or crotonic acid.

COATED FABRICS

SHOE STIFFENER. Adelbert P. Swett (to Beckwith Mfg. Co.). Can. P. 423 905, Nov. 21. The base fabric of a shoe stiffener is impregnated with an anhydrous coumarone-indene resin compounded with rubber, wax and rosin.

FLEXIBLE SHEET. George L. Dorough (to Can. Industries Ltd.). Can. P. 423 942, Nov. 21. Flexible transparent sheeting is formed from a network fabric of nylon type monofils and a continuous coating of a solid ethylene polymer.

RUBBERIZED FABRIC. Howard F. Weiss and C. F. Burgess Laboratories, Inc. (to Research Products Corp). Can. P. 423 994, Nov. 21. A network formed of slit expanded cellulose material is coated with rubber to form a resilient mesh fabric.

DYEING

DEVELOPED DYES. James W. Libby, Jr. (E. I. du Pont de Nemours & Co.). USP 2 363 537, Nov. 28. Textile fibers are colored by developing on the fiber an azo dye of the phthalocyanin series, using as coupling components a compound having a water-solubilizing group.

FABRICS

FELT MANUFACTURE. Felt Assoc'n, Inc. *Sheep & Goat Raiser 25,* No. 3, 28-34, 58 (1944). Wool felt has many uses, military and industrial. It can be cut so accurately for gaskets, grommets and other items that tolerance can be expressed in mils. Manufacturing operations are described and illustrated.

YARN FROM ROVING. Carleton S. Francis, Jr. (to Sylvania Industrial Corp.). Can. P. 424 014, Nov. 21. Nonladdering knit fabrics are made from multiply yarn formed by twisting a roving of thermoplastic fibers and a roving of nonthermoplastic fibers around each other, then bonding the strands together by heat.

ELASTIC FABRIC. Harold B. Hayto and Wallace B. Mattinson (to Henry Dreyfus). Can. P. 424 031, Nov. 21. An elastic knit fabric is made by warp-knitting relatively inelastic yarns together with spaced elastic yarns under tension. the elastic yarns being secured in part or all of the courses of the fabric, the fabric construction being such that areas of inelastic yarn are surrounded by elastic yarn.

FELT. Charles J. Kopriva and Percival T. Gates (to Drycor Felt Co.). Can. P. 424 093. Nov. 28. A coarsely woven warp and weft base cloth is fed lengthwise to produce rectangular mesh openings and fibrous material is introduced into the base cloth by reciprocating needles.

FIBERS

CELLULOSE STRUCTURE. W. T. Astbury and M. M. Davies; Leeds Univ.; E. G. Cox. *Nature 154,* 84; 84-5 (1944). The structure of cellulose proposed by F. T. Peirce (*Nature 153,* 568), based on a pyranose ring of nearly coplanar C atoms with a right angle between the bonds of the ring oxygen, is deemed unnecessary to explain observed facts; the strainless "armchair" formula fits the facts better. Reply by F. T. Peirce, p. 398.

ACETYLATED CASEIN. Alfred E. Brown, W. G. Gordon, Edith C. Gall and R. W. Jackson, USDA, Eastern Regional Laboratory. *Ind. Chem. 36,* 1171-5 (1944). Acetylation of casein fiber (up to 9% acetyl) improves stability to boiling dye-baths and increases affinity for acid dyes without loss of wet or dry tensile strength. Three types, known (from the method of collection) as aluminum skein, aluminum reel and nonaluminum reel fibers, were tested.

WOOL SHRINKAGE. C. S. Whewell and H. J. Woods. Leeds Univ. *Nature 154,* 546 (1944). Cuprammonium solution does not dissolve wool, as it does cellulose, but it causes a reversible shrinkage apparently due to powerful affinity of active groups (probably NH_2 and NH groups) in the keratin molecule for copper.

SYNTHETIC FIBER. Carl J. Frosch (to Bell Telephone Laboratories, Inc.). USP 2 363 581, Nov. 28. A polyester which is capable of cold drawing into filaments is made by esterifying a glycol with a dicarboxylic acid in presence of less than 1 mol-% glycerin.

KNITTING

KNITTING. Fritz Lambach. USP 2 363 535, Nov. 28. A knitting machine has an electrically driven shaft and a hand wheel shaft with gears arranged for shifting from one drive to the other.

KNITTING MACHINE. Wm. A. Cooper (to Wm. Cotton Ltd.). Can. P. 424 084, Nov. 28. In straight bar knitting machines such as the Cotton Patent machine single-butt sinkers are employed which are tapered in width while the catch bar groove is correspondingly tapered in section.

MACHINES

COMBING. John W. Nasmith. USP 2 363 546. Nov. 28. A combing machine for textile fibers is so designed as to permit a regular variation in the length of the top comb pad between the forward and backward movements of the top comb.

MACHINES, WINDING

FABRIC WINDER. George W. Lane (to Van Vlaanderen Machine Co.). USP 2 363 678, Nov. 28. A machine for winding fabrics has an idle chuck and an active chuck, the latter being connected to a mechanical drive and also held by a frame against the idle chuck.

WINDING. Martin J. Kirk (to Johnson Laboratories, Inc.). USP 2 363 677, Nov. 28. A machine for winding a filament into a coil has a tensioning device for unwinding the filaments from a support at a predetermined tension.

PROCESSING

RESIN BONDING. Frederick S. Bacon (to Monsanto Chem. Co.). USP 2 361 527, Oct. 31. Fibrous materials are bonded together by means of a thermoplastic polyvinyl acetal resin containing not more than 5% of an inorganic pigment to reduce cold flow of the resin; bonding is effected by heat and pressure.

THREAD PROCESSING. Louis S. Fryer and Richard F. Bergmann (to Industrial Rayon Corp.). USP 2 362 063, Nov. 7. A thread processing apparatus having several operating levels is arranged for maintenance of a constant flow of fresh air across the operating face, beginning at the top and withdrawing air at each of the operating levels.

TREATING DYED FABRICS. James H. MacGregor (to Courtaulds Ltd.). USP 2 362 915, Nov. 14. Laundry fastness of the dye on textiles dyed with direct cotton dyes is improved and a soft silky handle is imparted to the fabric by treatment with a water-soluble condensation product of formaldehyde and an arylguanidine or a guanidine salt of an organic acid, after which the soluble condensate is insolubilized.

IMPREGNATING THREAD. Edson F. Gallaudet. USP 2 363 783, Nov. 28. A treated cord is drawn through a nozzle which tapers to an orifice and is formed of tightly joined segments.

CARBONIZING WOOL. Edward B. Bell (to Hall Laboratories, Inc.). Can. P. 423 534, Oct. 31. Precipitation of calcium sulphate in wool carbonizing baths is prevented by adding a small proportion of sodium metaphosphate.

LUSTERING WOOL. Henry Phillips, Wm. R. Middlebrook and Alfred E. Higgins. Can P. 423 588, Nov. 7. A silk-like luster is imparted to wool by treatment (at a moisture content not above 9%) with a nonaqueous felting inhibitor and then with a solution of papain.

TREATING TEXTILES. Ralph J. Mann, Robert Martin and Wilfred Harmer (to Henry Dreyfus). Can. P. 423 709, Nov. 7. Continuous treatment of textile fabrics in open width is effected in a covered tank having a smooth winding path through which the treated liquid is moved by convection currents.

PRODUCTS

BAG CLOSURES. Anon. *Cotton and Cotton Oil Press 45,* No. 23, A-6 (1944). The aquatex closure for waterproof, multiwall paper bags is made of starched crinoline laminated to a double napped flannel. The tape is sewed to the bottom of the bag and then dipped in a special wax which penetrates the crinoline and is absorbed by the flannel and the sewing threads. The same method is used to close the top of the bag after it has been filled. These closures have withstood very severe tests of outdoor exposure and rough handling.

SEMIPERMEABLE MEMBRANES. Wm. A. Moor, Washington Univ. School of Medicine. *Science 100,* 494-5 (1944). Deposition of silver on regenerated cellulose (Cellophane) foils for use as flexible mirrors led to deposition of copper, iron and other elements, and to preparation of photosensitive films.

SHRINK CAP. David H. Edwards and Edward O. Mueller (to E. I. du Pont de Nemours & Co.). USP 2 361, 464, Oct. 31. A tough regenerated cellulose shrink cap for bottles is perforated for easy removal by forming a row of tear-shaped holes with their ends directed toward each other in alternate pairs and drying the cap on the bottle so that the perforations take an elongated shape.

SHRINK CAP. Julian Ritchie (to E. I. du Pont de Nemours & Co.). USP 2 361 499, Oct. 31. Perforations around a tough regenerated cellulose shrink cap for bottles are formed by perforating the cap before application with pairs of circular holes joined by slits so that the final shape of the perforations after drying is elongated.

PYROTECHNIC DEVICE. Herbert P. Starner. USP 2 361 711, Oct. 31. A cellulosic material is impregnated with a solid wax having dispersed therein a flame-coloring composition, so arranged that the melted wax carries the coloring composition to different parts of the burning material.

SHOE SOLES. John Gregg (to Lynn D. Gregg). USP 2 361 938, Nov. 7. A strip of tacky rubber or the like is pressed against a strip of flexible material and the 2 adhering strips are wound into the general shape of a shoe sole which is then semi-cured to vulcanize the tacky strip.

TEXTILE APRON. Henry M. Bacon (to Dayton Rubber Mfg. Co.). USP 2 362 340, Nov. 7. A long draft textile apron is formed with a resilient fiber working surface and an inner surface composed of a perforated textile fabric with the outer composition protruding through the perforation to provide a gripping thread.

CELLULOSE FLOUR. Emil H. Balz, Andrew W. Kassay and Wm. D. Williams (to Libbey-Owens-Ford Glass Co.). USP 2 362 528, Nov. 14. Cellulose is ground in a tumbling impact mill. The fines are air-separated from the product and the tailings are ground again in a rotor impact mill from which the air-separated tailings are returned to the tumbling impact mill.

CAMOUFLAGE MATERIAL. Carl E. Williams. USP 2 362 786, Nov. 14. A net material which can be deformed into various shapes has all its exposed surfaces coated with flock by means of an adhesive, the projecting area of the flock being insufficient to close the holes in the net material.

INSULATED WIRE. Alexis W. Keen and Raymond B. Frost (to U. S. Rubber Co.). USP 2 363 871, Nov. 28. Rubber insulated wire is wrapped first with Cellophane tape, then with a fibrous material such as asbestos which is air blasted to raise the fibers, treated so that the raised fibers lie over the next strands, and finally bonded with an adhesive.

BAG CLOSURE THREAD. Gilbert R. Beebe and Archie W. Koon (to Columbian Rope Co.). Can. P. 424 081, November 28. Paper bags are closed by sewing with a polyvinyl alcohol thread which is dispersible along with the paper for regeneration purposes, when the bags are pulped.

BAG CLOSURE THREAD. James F. Simpson (to Columbian Rope Co.). Can. P. 424 082, Nov. 28. A sewing thread for paper bag closures which is dispersible along with the paper bag in a beater, is made of applied unsized twisted paper ends derived from manila fiber pulp.

INSULATING TAPE. Archibald A. New, Stanley G. Foord and Dudley R. Beckwith (to International Standard Electric Corp.). Can. P. 424 103, Nov. 28. Insulating tape is made with an adhesive which does not harden in air, the principal ingredients being a polystyrene resin plasticized with diphenylmethane, diphenylbutane or isoamylnaphthalene.

ADHESIVE TAPE. Howard J. Billings (to Johnson & Johnson, Ltd.). Can. P. 424 105, Nov. 28. Pressure adhering adhesive tape having a regenerated cellulose backing and a rubber-like pressure-sensitive adhesive coating is used with a primer composed of a polyvinyl alcohol dispersed in an artificial rubber latex.

ADHESIVE TAPE. Justin F. Wait (to Johnson & Johnson, Ltd.). Can. P. 424, 106, Nov. 28. Colored adhesive tape has a flexible fibrous support, a pressure-sensitive adhesive coating on one face and a colored resin coating on the other face.

RESEARCH

ARMOUR RESEARCH FOUNDATION. Harold Vagtborg. *Chem. Eng. News 22,* 2088-2102 (1944). The 8th annual report of the director to the board of trustees of Armour Research Foundation lists 117 projects and tells of progress on those which can be disclosed. Among them are projects on water supplies; starches; cellulose from agricultural wastes; gaskets for drum closures; pulping of kraft, super alpha and oat straw fibers; asphalt-impregnated cotton batting instead of treated kraft paper for overseas packaging; surgical sutures; sizes for tracing cloth; waterproof hollands for use in rubber manufacturing; testing roughness of coated fabrics; water-soluble cotton warp size which also improves the tensile properties of the warp; waterproofing fiber containers; glass fiber manufacture.

SPINNING

NEW RAYON SYSTEM. Anon. *Rayon Textile Monthly 25,* 578 (1944). The Borvisk positive stretch spinning process is claimed to be superior to the "converted" high-tenacity rayon systems used in America. It permits continuous operation and take-up speeds not hitherto reached by any wet spinning process; at least 50% more yards per minute per spinneret are obtained than on present spinning machines. The Borvisk staple fiber spinning system converts the continuous fiber bundles into spun rayon yarns of predetermined count, thus producing an entirely new kind of spun rayon yarn.

ROVING FRAMES. James L. Truslow and Henry L. Thomas (to Whitin Machine Works). USP 2 362 782, Nov. 14. A roving or spinning frame has a clearer roll associated with a driven drawing roll carrying a notch bank engaging with pins on the clearer roll for alternate holding and advancing of this roll.

SPINNING ROLL. Henry M. Bacon (to Dayton Rubber Mfg. Co.). Can. P. 423 804, Nov. 14. A spinning machine roll is covered with vulcanized fiber-contacting surface composed of a butadiene-acrylo-nitrile co-polymer having rubberlike particles dispersed therein and vulcanized.

TESTING

TEST METHODS. J. B. Goldberg, J. P. Stevens & Co. *Rayon Textile Monthly 25,* 557-9 (1944). Test methods have not kept up with the rapid advance in textile products. Sound testing procedures are needed for the modern methods of proofing against various influences and for the performance characteristics of a variety of new fibers and fabrics. Thermal insulation is an example in which at least half a dozen types of instruments have been recommended. Other properties needing improved test methods are abrasion resistance, crease resistance, dimensional stability and color fastness.

CORDAGE FIBERS. Herbert F. Schiefer. *J. Research Nat'l Bur. Standards 33,* 315-39 (1944). New tests for resistance to flexing and abrasion have been developed for cordage fibers, partly to facilitate evaluation of domestic fibers needed to replace hemp. Abaca gave the strongest fibers, though some abaca is weaker than sisal. The highest resistance to flexing and abrasion was found in henequen and sisal, but these fibers are inferior in stability to light and intermittent wetting. *Pita floja* and *Sanseviera* are strong fibers, but *Pita floja* has low abrasion resistance. Hemp and jute are very similar to each other. Abrasion resistance is quite sensitive to direction of twist in the ply as related to that in the bundle.

DENIER STANDARD. Leonard Shapiro. Warwick Chem. Co. *Rayon Textile Monthly 25,* 560-1 (1944). While the correct denier-length factor is 4,464,483 instead of the commonly used figure 4,464,528, the last 2 digits are actually significant according to any ordinary standard of measurement and it is recommended that the factor 4,464,500 be adopted instead.

TEXTILE CHEMICALS

GLUTINOUS STARCHES. Majel M. MacMasters and G. E. Hilbert, Northern Research Laboratory, USDA. *Ind. Eng. Chem. 36,* 958-63 (1944). Glutinous varieties of starch from corn or sorghum are generally higher in oil and protein, and more sensitive to process conditions, than nonglutinous starches. Glutinous starch from domestic sources can replace tapioca starch for many uses, being at least equal in translucency, viscosity, slow retrogradation and freedom from flavor. Uses in textile sizing or finishing and in coating paper are suggested.

WASTES

REGENERATED CELLULOSE. Frank H. Reichel (to Sylvania Ind. Corp.). Can. P. 423 562, Oct. 31. Waste from plasticized moistureproof cellulosic foils is recovered by treatment with a solvent for the moistureproofing coating, then with a solvent for the plasticizer, and separate recovery of these compositions from the regenerated cellulose.

WEAVING

LOOM REEDS. H. E. Wenrich, *Rayon Textile Monthly 25,* 577-8 (1944). Directions are given for repairing loom reeds by soldering, brazing or welding, and for storage of the reeds for future use. A small welding outfit is much superior to a soldering copper for reed repairs.

THREAD HOLDER. Herbert A. Whitin (to Crompton & Knowles Loom Works). USP 2 361 340, Oct. 24. A thread holder for weft replenishing looms is operated by vibration of an auxiliary arm mounted on a support arm at one end of the loom.

PICKER STICK CHECK. Frank P. Medeiros (1/3 each to Antonio S. Aguiar and William Hunt). USP 2 362 916, Nov. 14. A picker stick check has a base adaptability attached to a loom and a roller mounted thereon in such a way that a rotating drum is positioned for impact by the picker stick, while a stop device is placed next to the rotating drum for impact after impact on the drum.

BOBBIN CAN. Richard G. Turner (to Crompton & Knowles Loom Works). USP 2 363 100, Nov. 21. Bobbins expelled from a weft replenishing loom move downward and forward from the lay to a curved bobbin chute into a can, the chute having a resilient connection to the back wall of the can permitting motion of the chute toward the front wall.

PICKER STICK. Walter J. Budzyna (to Draper Corp.). USP 2 363 459, Nov. 21. Friction devices for a picker stick check mechanism have a pair of friction fingers engaging opposite spaces of the check strap so that the check strap follows a winding path when moved by the picker stick.

BOBBIN SELECTOR. Victor H. Jennings (to Crompton & Knowles Loom Works). USP 2 363 593-4, Nov. 28. A weft replenishing loom having a pair of bobbin releases is fitted with a selector movable so that it registers with either of the releasing devices and a stop device controlled by one of the releases for shifting the selector from one releaser to the other; and a loom having 3 stacks of bobbins, each with a bobbin releaser, is similarly fitted with a selector having a free position.

BOBBIN RELEASER. Walter A. Patterson (to Crompton & Knowles Loom Works). USP 2 363 620, Nov. 28. A bobbin releaser for weft replenishing looms has a magazine setting device and a member which operates a stack selector stop.

BOBBIN SELECTOR. Walter H. Wakefield (to Crompton & Knowles Loom Works). USP 2 363 628-9, Nov. 28. A loom with 2 pairs of bobbin stacks has a bobbin releaser for each stack and a selector movable to 4 different positions governed by a positioning device; and a loom having several bobbin stacks with a releaser for each stack has selector stops governed by a crane which is capable of stepwise rotation from position to position of the selector.

LOOM. Charles Clutsom. Can. P. 423 482, Oct. 31. A loom with stationary weft supply has a thread guide arranged to form a selvedge, and a device which holds back the formed portion of the selvedge when the thread guide moves to take the weft.

WARP STOP MOTION. Charles E. Whittaker and George G. Slough. Can. P. 423 591, Nov. 7. A terry loom has a warp stop motion in which a slotted extension allows the drop wires to be lifted when the loom is operating on the loose pick or pile pick of the terry warp to bring the drop wires out of contact with the warp stop motion.

YARN

YARN NUMBERING. A. G. Scroggie, E. I. du Pont de Nemours & Co. *Rayon Textile Monthly 25,* 429-30 (1944). A critical discussion and comparison of the Grex and Poumar systems of yarn numbering, with accent on the Grex system largely because the metric units which it employs are international in character.

RAYON TIRE CORD. J. W. Stribling, Cotton. *Cotton 108,* No. 9, 100-2, 110 (1944). The manufacture of tire cord at the Decatur (Alabama) Mills of the Goodyear Co. is described and illustrated. Yarn for self-sealing gas tanks is also produced.

HOSIERY YARNS. Noel D. White, *Rayon Textile Monthly 25,* 444-5 (1944). Presumably nylon will return to the hosiery field faster than silk after the war. Rayon has several advantages for use in hosiery but the high tenacity rayon has not yet been successfully adapted to this use. It seems probable that Vinyon and Velon will also be used as hosiery yarns after the war.

VISCOSE YARN. Benj. W. Collins. USP 2 359 749, Oct. 10. An acid bath for precipitating viscose filaments or film contains a small proportion of a sorbitan monolaurate derivative having at least 1 polyoxyethylene group which contains on the average about 20 oxyethylene units per molecule.

STAPLE FIBERS. Claud H. Hays and Wm. A. Dickie (to Celanese Corp. of America). USP 2 359 847, Oct. 10. Staple fiber yarn is made from continuous filament rayon by passing a bundle of filaments through 2 sets of drafting rolls, the first set having the heavier load while the second set is operated at least 5 times faster than the first so as to break and draft at least part of the filament, and varying the speed of the second set of rolls at intervals to produce varying thicknesses in the yarn.

TAG CORD. Charles B. Gudebrod. USP 2 359 988, Oct. 10. Cord for indentification tags has a core of spun glass and asbestos fibers together with a metal strand twisted therein, and a braided sheet of textile yarn impregnated with a flameproofing agent.

YARN. Henry Frey. USP 2 361 999, Nov. 7. In throwing a continuous filament yarn the first twist is reversed without being set and the number of turns per inch in the second twist is more than twice the number in the first twist.

VILLOUS YARN. William R. McLain (to Eastman Kodak Co.). USP 2 362 572, Nov. 14. A villous synthetic yarn which closely resembles spun yarn is made by cutting a strand of preformed synthetic continuous filaments into staple fibers by passage through the arc between 2 electrodes fed with a high potential current.

YARN. Robert W. Moncrieff and William I. Taylor (to Henry Dreyfus). Can. P. 423 338, Oct. 17. Cellulose acetate yarns are spun from acetone solution and wound on a bobbin having a perforated barrel through which hot air is supplied to the yarn to evaporate the acetone.

TWIST SETTING. Alfred C. Goodings and Leslie H. Turl (to Ontario Research Foundation). Can. P. 423 548, Oct. 31. Twist in rayon knitting yarns is set with an aqueous emulsion of paraffin wax (m. p. between 117 and 130°F.) and a mono- or diglyceride of stearic or palmitic acid.

PLIED YARN. Roger N. Wallach (to Sylvania Industrial Corp). Can. P. 424 015, Nov. 21. Multiply cord is formed by twisting together 2 or more yarns at least one of which is formed mostly of textile fibers and a smaller proportion of potentially adhesive fibers and compacting the plied yarns while the latter fibers are in an adhesive condition.

END OF VOLUME I

PERIODICALS REVIEWED

American Dyestuff Reporter
American Journal of Physics
American Machinist
American Society for Testing Materials Bulletin
American Wool and Cotton Reporter
Analyst
Annalen der Chemie (Liebigs)
Annalen der Physik
Annales de Physique
Bell Laboratories Record
Bell System Technical Journal
Canadian Chemistry and Process Industries
Canadian Journal of Research
Canadian Patent Office Record
Canadian Textile Journal
Chemical Age (London)
Chemical and Engineering News
Chemical and Metallurgical Engineering
Chemical Industries
Chemical Review
Chemie
Chemiker-Zeitung
Chemistry and Industry
Civil Engineering
Cotton (Atlanta)
Cotton (Manchester)
Cotton and Cotton Oil Press
Cotton Trade Journal
Dupont Magazine
Dyer and Textile Printer
Dyestuffs
Electronic Industries
Electronics
Engineer
Engineering
Engineering Journal
Engineering News-Record
Fairfax Monthly
Fibre and Fabric
Fibres, Fabrics and Cordage
General Electric Review
Heating Piping Air Conditioning
Helvetica Chimica Acta
Indian Textile Journal
Industrial and Engineering Chemistry
Industrial and Engineering Chemistry (Analytical Edition)
Industrial Bulletin (A. D. Little, Inc.)
Industrial Standardization
Industry and Power
Ingenieria
Instrumentation
Instruments
Interchemical Review
International Textiles
Journal and Proceedings of the Institute of Mechanical Engineers (London)
Journal of Applied Mechanics
Journal of Applied Physics
Journal of Chemical Education
Journal of Chemical Physics
Journal of Home Economics
Journal of Organic Chemistry
Journal of Physical Chemistry
Journal of Research, National Bureau of Standards
Journal of Scientific Instruments
Journal of the Acoustical Society of America
Journal of the American Chemical Society
Journal of the American Water Works Association
Journal of the Association of Official Agricultural Chemists
Journal of the Chemical Society
Journal of the Franklin Institute
Journal of the New England Water Works Association
Journal of the Optical Society of America
Journal of the Society of Chemical Industry
Journal of the Society of Dyers and Colourists
Journal of the Textile Institute
Jute and Canvas Review
Kolloid-Zeitschrift
Laboratory (Fisher Scientific Company)
Linens and Domestics
Machine Design
Manufacturers Record
Mechanical Engineering
Modern Plastics
Monsanto Magazine
National Canvas Goods Manufacturers Review
National Wool Grower
Nature
Official Gazette of the United States Patent Office
Philosophical Magazine
Power
Proceedings of the American Society of Civil Engineers
Proceedings of the National Academy of Sciences of the United States of America
Proceedings of the Royal Society (London)
Product Engineering
Rayon Organon
Rayon Textile Monthly
Record of Chemical Progress
Refrigerating Engineering
Review of Scientific Instruments
Rubber Age (New York)
S. A. E. Journal
Safety Engineering
Science
Sheep and Goat Raiser
Silk and Rayon
Southern Knitter
Southern Power and Industry
Technical News Bulletin, National Bureau of Standards
Technology Review
Textile Bulletin
Textile Colorist and Converter
Textile Manufacturer
Textile Recorder
Textile Research
Textile Weekly
Textile World
Transactions of the American Institute of Chemical Engineers
Transactions of the American Society of Mechanical Engineers
Transactions of the Faraday Society
Traveler
Weight Engineer
Wool Record and Textile World
Zeitschrift für analytische Chemie
Zeitschrift für Elektrochemie
Zeitschrift des Vereines deutscher Ingenieure

NOTICE TO READERS

Index. An author index for Volume I (June-December, 1944) will be printed separately and sent to all recipients of Volume I.

Classification. A revised classification will be used in 1945, beginning with Volume II, No. 1.

Circulation. Beginning with Volume II free circulation of "Textile Technology Digest" will be restricted to members, staff and students of the Institute of Textile Technology. Copies will also be supplied without charge under acceptable exchange arrangements.

The Institute of Textile Technology reserves the right to limit outside circulation, but will accept paid subscriptions (whole calendar years only) within such limitations of circulation as may be deemed desirable. The subscription price is $15.00 per year, payable in advance.